

## CLAIMS

What is claimed is:

1. A system for dynamically reconfiguring a wireless computer communication device by processing a signal provided by the wireless computer communication device, comprising:

an attenuation level logic operably connectable to the wireless computer communication device, the attenuation level logic being configured to determine a desired attenuation level for a second wireless computer communication signal derived from a first wireless computer communication signal provided by the wireless computer communication device; and

an attenuation circuit operably connected to the attenuation level logic, the attenuation circuit being configured to produce the second wireless computer communication signal by attenuating the first wireless computer communication signal to the desired attenuation level.

2. The device of claim 1, where the attenuation level logic determines the desired attenuation level based, at least in part, on a distance between the wireless computer communication device and a receiver of the second wireless computer communication signal.

3. The system of claim 1, the attenuation circuit being manually controllable by a user.

4. The system of claim 1, the attenuation circuit being programmatically controllable by the attenuation level logic.

5. The system of claim 1, the attenuation circuit comprising an attenuator.

6. The system of claim 1, the attenuation circuit comprising a reduction bridge circuit.
7. The system of claim 1, where the attenuation circuit includes one or more transmission media having different selectable line loss characteristics.
8. The system of claim 7, where a line loss characteristic is related to the length of a transmission medium.
9. The system of claim 7, where a line loss characteristic is determined by a transmission medium dielectric material.
10. The system of claim 1, where the wireless computer communication device is a router.
11. The system of claim 1, where the second wireless computer communication signal conforms to an IEEE 802.11 protocol.
12. The system of claim 1, where the second wireless computer communication signal conforms to an IEEE 802.15 protocol.
13. The system of claim 1, where the attenuation level logic determines the desired attenuation level by evaluating a response to a set of negotiation messages transmitted with different attenuation levels determined by the attenuation level logic.
14. The system of claim 1, where the attenuation level logic periodically redetermines the desired attenuation level.
15. A method, comprising:  
    associating an attenuation circuit with a wireless computer communication device;

determining a desired attenuation level for a wireless computer communication signal produced by the wireless computer communication device; and  
configuring the attenuation circuit to attenuate the wireless computer communication signal to the desired attenuation level.

16. The method of claim 15, where determining the desired attenuation level includes receiving an input from a human user.

17. The method of claim 15, where determining the desired attenuation level includes:  
calculating a distance between the wireless computer communication device and a receiver of the wireless computer communication signal; and  
determining the desired attenuation level based, at least in part, on the distance.

18. The method of claim 17, including:  
recalculating the distance between the wireless computer communication device and the receiver of the wireless computer communication signal; and  
redetermining the desired attenuation level based, at least in part, on the recalculated distance.

19. The method of claim 15, where determining the desired attenuation level includes:  
calculating a signal strength for a wireless signal received from a wireless device;  
and  
determining the desired attenuation level based, at least in part, on the signal strength.

20. The method of claim 19, including:  
recalculating a signal strength for a wireless signal; and  
redetermining the desired attenuation level based, at least in part, on the recalculated signal strength.

21. The method of claim 15, where determining the desired attenuation level includes:

transmitting a set of wireless computer communications to a wireless device with which the wireless computer communication device is communicating, where the set of wireless computer communications are attenuated at different levels; and

determining the desired attenuation level based, at least in part, on a response to transmitting the set of wireless computer communications.

22. The method of claim 21, including:

retransmitting the set of wireless computer communications; and  
redetermining the desired attenuation level.

23. The method of claim 15, where configuring the attenuation circuit includes:

programmatically changing a resistance in a reduction bridge associated with the attenuation circuit.

24. The method of claim 15, where configuring the attenuation circuit includes:

selecting a desired line loss associated with a transmission medium through which the wireless computer communication signal passes before being transmitted.

25. The method of claim 15, where configuring a wireless computer communication device includes:

selecting an attenuator through which the wireless computer communication signal passes before being transmitted.

26. A system for reconfiguring a wireless computer communication device to transmit at a dynamically selectable attenuation level, comprising:

means for determining a desired attenuation amount by which a wireless computer communication signal is to be attenuated; and

means for attenuating the wireless computer communication signal by the desired attenuation amount.

27. A data packet for transmitting attenuation data associated with reconfiguring a wireless computer communication device by attenuating a wireless computer communication signal produced by the wireless computer communication device to a dynamically selectable attenuation level, comprising:

- a first field that stores an attenuation level data; and

- a second field that stores a quality of service data, where the quality of service data is related to receiving a wireless computer communication signal attenuated to a level described by the attenuation level data.